



Energy Briefs

Helping You Live Energy Efficiently!

Air Conditioner Operating Tips

As warm weather approaches, it's a good idea to tune up your home's air conditioner or heat pump. Some tips that should help save money and extend the life of the cooling equipment follow.

Provide Good Air Flow to Outdoor Cooling Equipment

The outdoor unit of the air conditioner contains a condensing coil, a type of heat exchanger which depends on large quantities of air flow to dump heat outside your home. Keep this equipment clear of tall grass, leaves and other debris.

Do Not enclose the outdoor unit with solid fencing or dense shrubs, or place the unit under a deck. Provide at least 2 feet of clearance on all sides of the equipment and 5 feet of clearance at the top. Be certain that a clothes dryer is not vented within 10 feet of the outdoor unit. The lint from the dryer will cling to the condensing coil and lower the efficiency of the equipment and its service life.

Keep Condensing Coil Clean

The condensing coil should be cleaned every year or so. This cleaning is usually a part of a regular service contract. The coil is easily accessible and must be chemically cleaned. If the fins in the heat exchanger are bent, they should be straightened with a comb.

Keep the Indoor Coil Clean

The indoor coil, or evaporator coil, is located inside the heat pump or air conditioner cabinet. All the air from the home flows across this coil to be cooled in summer.

When air conditioning, the indoor coil is damp, attracts dirt and can harbor mold and other contaminants. A dirty indoor coil endangers your family's health, wastes energy and cuts the capacity of the cooling equipment.

Dirty indoor coils are notorious for reducing the air flow through the equipment. For each 10% reduction in air flow, the efficiency drops about 5%. Reduced air flow means less cooling and makes it difficult to maintain a house's comfort in hot weather.

The coil should be cleaned every few years, depending on how often the system operates, the efficiency of the filter at trapping dirt, and the airtightness of the ductwork. Leaky ducts often draw in dirt which can accumulate on the indoor coil, so seal the seams in your home's ductwork.

Indoor coils are often dirty because they are hard to reach and therefore seldom cleaned. Frequently a service technician will have to cut into the ductwork in order to inspect the indoor coil. The coil should be cleaned with a chemical solution and a soft brush. Typically it takes a couple of hours for a technician to clean the coil and may cost from \$50 to \$200, depending on accessibility.

In addition to cleaning the indoor coil, have the technician check the blower. Usually, the blower is readily accessible and can be easily removed and cleaned.

Operate the Cooling Equipment Wisely

To get the most out of your heat pump or air conditioner, for the least cost, operate it efficiently. Start with the thermostat. A higher setting saves money. Try keeping the room air temperature at 78 to 80 degrees and using ceiling and room fans to circulate the air to maintain comfort. Each degree you raise the thermostat can save up to 5% on cooling costs. Any time you will be away from the house for a few hours, be sure to raise the thermostat setting. You will save money and it should only take a few minutes for the cooling equipment to bring the temperature back to a comfortable level after you return.

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Shade Windows

Over 20% of your air conditioning bill can be due to sunlight streaming through unshaded windows. Keep window curtains drawn during the day to block sunlight. Keeping east and west windows shaded is particularly important as they get the most sunlight in summer.

Solar shade screens are another effective way to shade windows. These fiberglass insect screens have a special weave that blocks sunlight. They can be installed in standard screen frames and must be placed on the outside of the window glass. The shade screens are a little darker than conventional insect screening. Some people appreciate the increased privacy they offer.



It's Not Just the Heat... It's the Humidity

Reducing moisture levels inside the home can save on cooling costs and improve comfort. Air conditioners and heat pumps dehumidify the air as well as cool it. Much of the excess humidity inside the home comes from humid outdoor air leaking inside. Sealing unwanted air leaks, such as around holes for plumbing and wiring, helps lower interior moisture levels and reduce air conditioning costs. For some houses, air leaks can contribute to over 30% of cooling costs.

Simple Check on Cooling Efficiency

One easy way to determine if your air conditioner or heat pump needs a tune-up is to check the difference in temperature between the air exiting the supply ducts and that drawn into the return ducts. You will need an accurate thermometer for the test and to operate the cooling equipment for at least 15 minutes when the outdoor temperature is above 80 degrees. While the unit is running, measure the temperature of the air at a return and a supply register. These registers should be the ones closest to the inside cooling equipment. The temperature difference should be between 14 and 20 degrees. A smaller difference indicates time for a service call.

Did you know . . .

You may be eligible to receive up to \$300 in tax credits for the purchase of an energy efficient central air conditioner?

Learn more at www.energy.sc.gov, under the Residential Tax Incentive section.

*Based on information provided by the Southface Energy Institute.

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